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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,360	06/16/2006	Claudio Giacometti	71975	7251

23872 7590 04/16/2010

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EXAMINER	
TOLIN, MICHAEL A	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
04/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,360	GIACOMETTI, CLAUDIO	
	Examiner	Art Unit	
	MICHAEL A. TOLIN	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-14,19-24 and 35-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-14,19-24 and 35-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05 April 2010 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 19, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giacometti (US 5709829) in view of any one of Muth (WO 03/004229 A1 referencing US 2004/0209041 as an English-language equivalent), Schulz (US 5913997) or Cruise (US 5874159).

Giacometti teaches a method of producing a perforated web material wherein the web material is fed through a nip between a first roller 7 and a second roller 5 rotating in

opposite directions and pressed against each other (Figure 1; column 2, lines 52-64), the first roller being provided with protuberances for perforation (column 1, lines 60-67). Giacometti teaches that the first and second roller rotate with different peripheral speeds (column 1, lines 65-67).

Giacometti differs from claim 1 in that Giacometti does not recite the claimed step of preheating. However, such a step of preheating prior to thermal treatment between opposed rolls is generally known in the art. For example, Muth teaches preheating on a heated roll 5 prior to perforation between heated rolls in order to achieve especially stable perforation (paragraphs 29, 30 and 41; Figure 1). While Muth shows preheating on one of the perforating rollers (Figure 1) as opposed to prior to contacting the rollers as now claimed, Muth also indicates that heating devices not shown may heat the nonwoven prior to performation, thus suggesting this limitation (paragraph 41). Schulz teaches preheating prior to thermomechanical treatment of a web in order to achieve very uniform treatment, provide increased flexibility in processing conditions at various line speeds and web materials, optimize the thermomechanical treatment, and to provide precise temperature control prior to the thermomechanical treatment (column 2). Schulz also indicates that the thermomechanical treatment may include processing the preheated web material between heated rolls and preheating prior to contacting the rolls (column 3, lines 25-31; Figures 1 and 2). Cruise teaches that preheating prior to calendering between rolls and before contacting the rolls allows an increase in manufacturing speed because the opposed rolls do not have to heat the fabric as much (column 5, lines 64-67; column 6, lines 1-8). It would have been obvious to one of

ordinary skill in the art at the time of the invention to provide Giacometti with the claimed step of preheating because one of ordinary skill in the art would have been motivated to achieve any of the above noted benefits in accordance with the teachings of any one of Muth, Schulz, or Cruise.

The limitations of claims 2, 4 and 5 are clearly satisfied by Giacometti (Abstract; column 1, lines 60-67; column 2, lines 13-27 and 40-51; column 4, lines 33-39).

The limitations of claim 19, 23 and 24 are clearly taught by Giacometti (column 2, lines 13-27).

4. Claims 6 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giacometti in view of any one of Muth, Schulz or Cruise as applied to claims 1, 2, 4, 5, 19, 23 and 24 above, and further in view of Dettmer (WO 99/25911 referencing US 6395211 as an English-language equivalent).

Regarding claim 6, Giacometti does not recite that the web material is bonded prior to being fed into the nip. Dettmer teaches that pre-bonding prior to feeding a nonwoven web into a nip for providing apertures in the web is advantageous in that the fibers are held together and do not prematurely or individually come into contact with the embossing roller which produces perforations (column 2, lines 58-60; column 3, lines 12-15). As to providing a bonded nonwoven fabric by using the claimed steps of producing a web of fibers and bonding the fibers, such is a conventional method of forming a bonded nonwoven fabric. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the claimed steps of producing and

bonding because one of ordinary skill in the art would have been motivated to achieve the above noted benefits taught by Dettmer when using a bonded web and one of ordinary skill in the art would have been motivated to provide such a bonded web by conventional methods known in the art.

The limitation of claim 10 is clearly taught by Giacometti (column 1, lines and 65-67).

Regarding claims 12 and 13, Giacometti indicates that the speed of the web material may be equal to the peripheral speed of the second roller (column 6, lines 20-23). Giacometti further teaches that the peripheral speed of the first roller should be varied to suit the base material being used and may be as low as 10% higher than the second roller, corresponding to a feed speed of about 90% of the peripheral speed of the first roller (column 2, lines 52-64). Accordingly, the ranges suggested by Giacometti appear to satisfy the claimed ranges. In any event, Giacometti teaches varying the rate of slipping to achieve suitable results. In particular, Giacometti seeks to provide perforations which promote liquid travel in a single direction (column 1, lines 41-47; column 2, lines 1-12). Thus it appears that no more than routine experimentation is involved in selecting the peripheral speed of the first roller to achieve the desired perforation characteristics. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the limitations of claims 12 and 13 because one of ordinary skill in the art would have been motivated to adjust the peripheral speed of the first roller to achieve the perforation characteristics taught by Giacometti as a matter of routine experimentation in view of the rate of slipping ranges taught by Giacometti.

The limitations of claims 11 and 14 have been satisfied for the reasons provided above.

5. Claims 7-9, 20-22, and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giacometti in view of any one of Muth, Schulz or Cruise, and further in view of Dettmer as applied to claims 6 and 10-14 above, and further in view of Pike (US 5382400).

Regarding claim 7, while Giacometti shows a web material being unwound from a roll, it is also old and well known in the art that in-line production of a nonwoven material is an alternative suitable method of providing the web material. For example, Pike explains that web materials may be preformed and provided to a manufacturing process or they may be manufactured in-line using web formation and bonding stations (column 10, lines 36-57; Figure 1). One of ordinary skill in the art would have readily appreciated that the in-line method eliminates the steps of winding the web material and subsequently unwinding it to feed the web to a perforating station. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the limitation of claim 7 because one of ordinary skill in the art would have been motivated to provide the web material in any suitable known manner such as the well known in-line method evidenced by Pike.

Regarding claims 8 and 9, Pike suggests a heating and bonding station using a through-air system in order to provide suitable bonding as well as to provide a more lofty web (column 4, lines 34-48; column 8, lines 25-30). As set forth in the rejection of

claims 6 and 10-14 above, Dettmer provides motivation to use a bonded web in a process of forming perforations in a web by feeding between rollers. Since Dettmer does not recite particular methods of bonding, one of ordinary skill in the art would have been motivated to look to the prior art for known methods of forming a bonded web. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the limitations of claims 8 and 9 because one of ordinary skill in the art would have been motivated to provide the bonded web suggested by Dettmer using suitable known methods as evidenced by Pike, or because one of ordinary skill in the art would have been motivated to achieve the lofty characteristics in forming a bonded web by through-air bonding in accordance with the teachings of Pike.

Regarding claim 20, Pike recognizes that unbonded nonwoven webs may be combined and subsequently laminated (column 10, lines 36-57). Performing such lamination in a heating station, for example by point bonding or through-air bonding, is well known in the art. As noted above, the primary reference to Giacometti suggests the use of composite nonwoven webs (column 2, lines 13-27). Further, as noted above, Dettmer suggests the use of a pre-bonded web prior to perforation between rollers in order to hold fibers together and prevent them from coming into contact with a roller surface prematurely. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the limitation of claim 20 because one of ordinary skill in the art would have been motivated to provide a bonded web material to achieve the above noted advantages in accordance with the teachings of Dettmer using known suitable methods of providing such a bonded web in accordance with the teachings of

Pike and well known heated lamination methods for forming bonded nonwoven composite fabrics.

Regarding claim 21, Pike recognizes that unbonded or pre-bonded nonwoven fabric webs may be combined and laminated (column 10, lines 36-57). As noted above, Dettmer suggests the use of a pre-bonded web prior to perforation between rollers in order to hold fibers together and prevent them from coming into contact with a roller surface prematurely. It is also generally well known in the art of processing nonwoven fabrics that such fabrics may be subjected to a relatively light thermal point bonding operation in order to provide the fabrics with sufficient integrity for subsequent processing. As noted above with respect to claim 19, Giacometti clearly teaches combining nonwoven fabrics together in the perforating operation (column 2, lines 13-27). Furthermore, there is a very limited number of options when combining nonwoven webs, i.e. neither, one or both of the webs are pre-bonded. Accordingly, in view of Pike's recognition that pre-bonded or unbonded webs may be combined, Dettmer's suggestion to use a pre-bonded web, and the generally well known use of thermal point bonding to provide nonwoven webs with integrity for further processing, the examiner's position is that no more than routine experimentation is required to select from such a limited number of possible options in order to suitably join and perforate the nonwoven fabrics as suggested by the primary reference to Giacometti. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the claimed forming, feeding and perforating steps of claim 21 because one of ordinary skill in the art would have been motivated to pre-bond the nonwoven webs suggested by

Giacometti in accordance with the above noted teachings of Dettmer, in order to provide the webs with integrity in accordance with well known methods, or as a matter of routine experimentation to achieve suitable lamination and perforation in view of the limited number of possible combinations and Pike's teaching that either unbonded or pre-bonded nonwoven webs may be combined.

Regarding claim 22, Pike suggests the use of bicomponent fibers in order to allow production of a lofty fabric useful in a absorbent articles as a liner material, and also to allow suitable bonding by a through-air method (column 9, lines 10-64; column 4, lines 34-47). The primary reference to Giacometti is also directed to a liner material for absorbent articles (column 5, lines 40-58). It would have been obvious to one of ordinary skill in the art at the time of the invention to use bicomponent fibers in the web material because one of ordinary skill in the art would have been motivated to achieve the above noted benefits in accordance with the teachings of Pike.

Regarding claim 35, the newly added language requires preheating and at least partially melting first and second web materials. As noted above, Pike recognizes that unbonded nonwoven webs may be combined and subsequently laminated (column 10, lines 36-57). Performing such lamination in a heating station, for example by point bonding or through-air bonding, is well known in the art. Such heated bonding inherently involves partially melting the first and second webs because such bonding involves melting of fibers to bond the fibers to each other and to bond the webs together. When forming and heat bonding a web in-line as suggested by Pike, the bonded web is thus preheated prior to the subsequent perforation taught by Giacometti.

As noted above, any one of Muth, Schulz or Cruise suggests preheating the web of Giacometti prior to Giacometti's step of perforating. Thus one of ordinary skill in the art would have fed the heat bonded web formed in-line as suggested by Pike to the perforating rollers of Giacometti. Clearly, if the heat bonded web is too hot or too cold, steps of additional preheating or allowing the web to cool would be provided. Such is not precluded by the claims. The alternative would be to allow the bonded web to cool and then preheat again in accordance with any of Muth, Shulz or Cruize. However, such would clearly be a waste of energy, as would have been readily apparent to one of ordinary skill in the art. In any event, preheating by heat bonding, cooling and subsequent preheating still satisfies the claims. For these reasons, the new language directed to partial melting during preheating is considered to be satisfied by the application of Pike to suggest in-line web formation and bonding as set forth above.

Claim 36 is satisfied for the reasons provided above.

Claim 37 is clearly suggested by Giacometti (column 2, lines 52-64).

Response to Arguments

6. Applicant's arguments filed 05 April 2010 have been fully considered but they are not persuasive.

Applicant argues that the preheating of the current invention provides the advantages of allowing more time to obtain perforation of the web material and allowing reduced stress on the web material by reducing pressure applied by the rollers. With respect to allowing more time to obtain perforation, it is noted that the claims do not

recite any particular time allowed for perforation. Further, while the prior art references applied for the preheating step do not recite allowing more time for perforation, these references to provide strong motivation for providing a preheating step. Muth teaches preheating to provide stable perforation. Schulz provides preheating to achieve several advantages including optimized control, uniform treatment and increased flexibility in operation. Cruise teaches preheating to increase manufacturing speed. The fact that Applicant has noted another advantage of preheating cannot be the basis for patentability because the prior art of record already provides strong motivation for performing a preheating step in the primary reference to Giacometti. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). As to reducing pressure, it is noted that most of the claims do not recite a particular pressure. Further, even new claim 37 directed to a particular pressure range includes pressures suggested by Giacometti. Accordingly, the argument directed to reduced pressure is not commensurate in scope with the claims.

Applicant argues Giacometti does not teach the preheating step. While the examiner does not dispute this argument, the rejection is based on a combination of references. As noted above, any one of Muth, Schulz or Cruise was relied upon for the preheating step.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues mosque does not provide any teaching or suggestion for the combination of preheating prior to treatment between rolls which rotate at different speeds. However, the primary reference to Giacometti suggests perforating a web material between rolls which rotate at different speeds. Muth was only applied in the alternative to suggest preheating in order to obtain a stable perforating operation. While not specifically recited by Muth, such preheating clearly provides the web with a controlled temperature prior to perforation. One of ordinary skill in the art would have expected the stability obtained from providing a web with controlled temperature to be relevant to other types of perforation, such as that suggested by Giacometti. Applicant argues Muth does not preheat prior to contacting the rollers. While Muth does show preheating on one of the rollers, Muth also indicates that heating devices not shown may preheat the web before perforation (paragraph 41). Accordingly, Muth does suggest preheating before contacting the rollers. It is also noted that Muth has been applied in the alternative.

Applicant argues Cruise and Schulz do not provide any teaching off combining preheating with feeding the web to rollers which rotate at different speeds as claimed. However, the primary reference to Giacometti was relied upon for feeding a web material to rollers which rotate at different speeds. As noted above, Cruise and Schulz were relied upon in the alternative for suggesting a preheating step. As detailed in the

rejection under 35 USC 103 above, one of ordinary skill in the art would have had a reasonable expectation of success in providing the advantages suggested by Cruise or Schulz when using a preheating step in the process of Giacometti.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. TOLIN whose telephone number is (571)272-8633. The examiner can normally be reached on M-F 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael A Tolin/
Primary Examiner, Art Unit 1791